

WHAT IS CLAIMED IS:

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1. A magnetic head actuator having a finely movable tracking device comprising:
a swing arm having a magnetic head at a free end and reciprocally movable around a coarse rotation axis at a base of the swing arm;
a piezoelectric element mounted in the swing arm, the piezoelectric element having a voltage-impressing electrode for allowing a fine arcuate movement of the free end around the coarse rotation axis in response to an applied voltage;
an FPC board having a resin base and a feeding line embedded in the resin base for feeding power to the voltage-impressing electrode,
wherein a portion of the resin base is removed to expose a portion of the feeding line that extends onto the electrode; and an electrical connection between the feeding line and the voltage impressing electrode at the exposed portion of the feeding line.
2. The magnetic head actuator according to Claim 1, wherein the electrical connection comprises an ultrasonic bond.
3. The magnetic head actuator according to Claim 1, wherein the electrical connection comprises an Au ball bond.

4. The magnetic head actuator according to Claim 1, wherein the electrical connection comprises a through-hole in the exposed portion of feeding line that is electrically connected to the voltage-impressing electrode by a gold ball positioned in the through-hole.

5. The magnetic head actuator according to Claim 1, wherein the electrical connection comprises a stud bump made of conductive material residing on the piezoelectric element, and wherein the exposed portion of the feeding line is electrically connected to the voltage-impressing electrode by a stud bump positioned in a through-hole located in the exposed portion of the feeding line.

6. The magnetic head actuator according to Claim 1 further comprising a pair of piezoelectric elements having polarities opposite to each other.

7. The magnetic head actuator according to Claim 1, further comprising a trace line leading to the magnetic head and extending, together with the feeding line, in the FPC board.

8. A magnetic head actuator having a finely movable tracking device, comprising:

a swing arm having a magnetic head at a free end and reciprocally movable around a coarse rotation axis of a base

of the swing arm;

a piezoelectric element mounted in the swing arm, the piezoelectric element having a voltage-impressing electrode for allowing a fine arcuate movement of the free end around the coarse rotation axis when a voltage is applied; and

an FPC board having a resin base and a feeding line embedded in the resin base for feeding power to the voltage-impressing electrode,

wherein the feeding line resides completely within the FPC board except for an exposed portion extending onto the voltage-impressing electrode, and wherein the exposed portion is bonded to the piezoelectric element, by a direct electrical connection between the voltage-impressing electrode and the exposed portion.

Subt a2 9. The magnetic head actuator according to Claim 8, wherein the direct electrical connection comprises an ultrasonic bond.

10. The magnetic head actuator according to Claim 8, wherein the direct electrical connection comprises an Au ball bond.

11. The magnetic head actuator according to Claim 8, wherein the electrical connection comprises a through-hole in the exposed portion of the feeding line that is electrically connected to the voltage-impressing electrode

by a gold ball positioned in the through-hole.

12. The magnetic head actuator according to Claim 8, wherein the electrical connection comprises a stud bump made of a conductive material residing on the piezoelectric element, and wherein the exposed portion of the feeding line is electrically connected to the voltage-impressing electrode by a stud bump positioned in a through-hole located in the exposed portion of the feeding line.

13. The magnetic head actuator according to Claim 8 further comprising a pair of piezoelectric elements having polarities opposite to each other.

14. The magnetic head actuator according to Claim 8, further comprising a trace line leading to the magnetic head and extending, together with the feeding line, in the FPC board.